ABSTRACT

A gear ratio mechanism contains five shafts, high and low range modules, and an inverter between a countershaft and an output shaft. A core and four multiplicities of gear ratios extend the range of variability. The core contains two differentials and a core input shaft drives a shaft of each differential. A core output shaft is driven by another differential and a third shaft of each differential is connected to a variator. The low range module contains two differentials and the input shaft drives a shaft of one. The countershaft is driven by another shaft from the other differential. Two multiplicities of gear ratios are between the shafts not connected to the input or output shafts and the variator is between a shaft of the first and one of the second gear ratio.